

REMARKS

In the Office Action mailed May 23, 2003, the Examiner indicated that Claim 28 would be allowable if rewritten in independent form to include all of the limitations of Claim 27 from which it depends. Applicant has amended Claim 27 so as to incorporate the prior content of Claim 28. As amended, Claim 27 is directed to a method for use in a medical procedure and comprises the steps of positioning a medical pad on a patient, said medical pad having a fluid circulating layer for containing a circulated fluid to achieve thermal exchange with the patient; locating at least one external electrode relative to the patient contemporaneous with the positioning step, said external electrode being interconnected to the fluid circulating layer; and transcutaneously receiving electrical energy at the external electrode from the patient. Applicant submits that Claims 27 and all claims dependent thereupon are in an allowable form.

In the Office Action, the Examiner rejected Claims 1-8, 27, 29 and 32-34 under 35 USC §103 as being obvious over U.S. Patent No. 4,140,130 to Storm. Claims 9-26, 30 and 31 were rejected under 35 USC §103 as being obvious over Storm in view of U.S. Patent No. 5,846,558 to Nielson et al. Applicant submits that the rejected claims are allowable over the art.

In particular, independent Claims 1 and 19 are directed to an inventive medical pad that includes a fluid containing layer for containing a thermal exchange fluid circulated therethrough, wherein the medical pad is operable for thermal exchange with a patient; and an external electrode interconnected to the fluid containing layer on a first side thereof, wherein the external electrode is adapted to transcutaneously receive electrical energy from a patient. The medical pad of Claim 21 also includes a conformable layer on the first side of the fluid containing layer with the external electrode located between the fluid containing layer and least a portion of the conformable layer. As noted in Applicant's pending application, the integration of a fluid containing layer and external electrode into the medical pad yields a number of advantages, including tandem positioning, enhanced contact and reduced componentry interference (Page 2, Lines 11-26).

Storm fails to disclose the noted features, e.g. a medical pad which includes, inter alia, an external electrode interconnected to a first side of a fluid containing layer and adapted for transcutaneous receipt of electrical energy from a patient. Rather, Storm is directed to a device having an “electrode means” for use in the localized application of heat via the emission/transmission of “short-wave or microwave frequencies to establish an electromagnetic field...”. (Column 2, Lines 1-9). More particularly, the electrode means 12 utilized in the Storm arrangement is electrically connected to a power source 18 that “may comprise a suitable known short-wave or microwave transmitter or generator capable of emitting radio frequencies...” (Column 5, Lines 52-58). Further in this regard, it should be appreciated that whether the electrode means 12 of Storm includes a pair of electrodes 12 (i.e. as shown in Fig. 1 and described at Column 7, Lines 23-48), or a single electrode (i.e. as shown in Fig. 2 and described at Column 7, Lines 49-55), such electrode(s) are only adapted for the transmission of electromagnetic waves to establish an electro-magnetic field for heating. As such, Storm fails to disclose or otherwise suggest an arrangement that utilizes an external electrode that is adapted for the transcutaneous receipt of electrical energy from a patient, much less the integrated medical pad arrangement defined by Claims 1 and 19 of the present invention.

Further, as to Claim 19, Storm also fails to disclose a medical pad comprising a conformable layer on the first side of a fluid containing layer with an external electrode located between the fluid containing layer and least a portion of the conformable layer. Rather, Storm only discloses an electrode means 12 having a bottom wall 21 that directly contacts a patient. (Column 6, Lines 4-7, and Lines 23-26).

Like Storm, Nielson also fails to disclose the medical pad of Claims 1 and 19. For example, Nielson et al. fails to even generally disclose or suggest, inter alia, a medical pad having a fluid containing layer with an external electrode interconnected thereto.

In addition to the shortcomings of both Storm and Nielson et al., Applicant submits that the teachings thereof cannot be combined to render any of the pending claims obvious. That is, the Storm and Nielson et al. patents provide absolutely no motivation or suggestion for any combination thereof. In this regard, while Nielson et al. is generally directed to “ionically

conductive adhesives" that may be employed on certain types of biomedical electrodes, Nielson et al. fails to disclose any applicability to the type of electrodes utilized in Storm for tissue heating. Further, none of the electrode embodiments disclosed in Nielson et al. include any accommodation for electrode cooling much less fluid circulation therethrough. Moreover, Storm utilizes a mechanical strap 25 for maintaining a contact interface between electrode means 12 and a patient, and there is absolutely no basis for assuming any need to substitute a different securement arrangement.

In view of the foregoing, Applicant submits that Claims 1 and 21 should be allowed. Additionally, Applicant submits all claims dependent upon Claim 1 and are allowable for the same reasons and since such claims present further combinative features not disclosed or otherwise rendered obvious by the prior art. For example, Storm fails to disclose an arrangement having an insulator surrounding an electrical connector that extends through a fluid containing layer as presented in Claim 6. Further, Storm fails to disclose an arrangement having an electrode located outside of a fluid containing layer as recited in Claims 36, 38 and 39.

Based upon the foregoing, Applicant believes that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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